SERVICE MANUAL

FISHER

CR-W47
CR-W147

Stereo Double Cassette Deck

(EUROPE)

1424-3707
(CR-W47)
1424-3711
(CR-W147)

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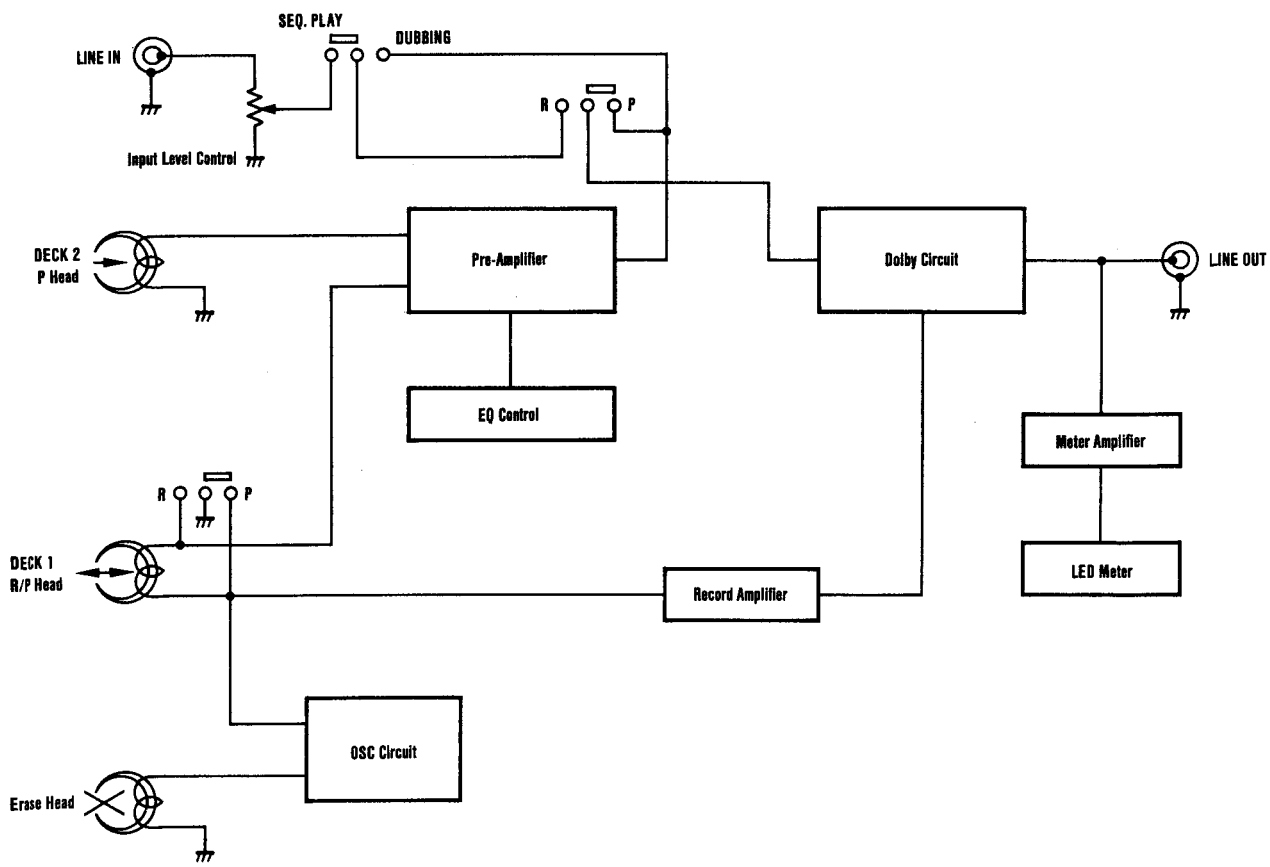
FUNCTIONAL BLOCK DIAGRAM



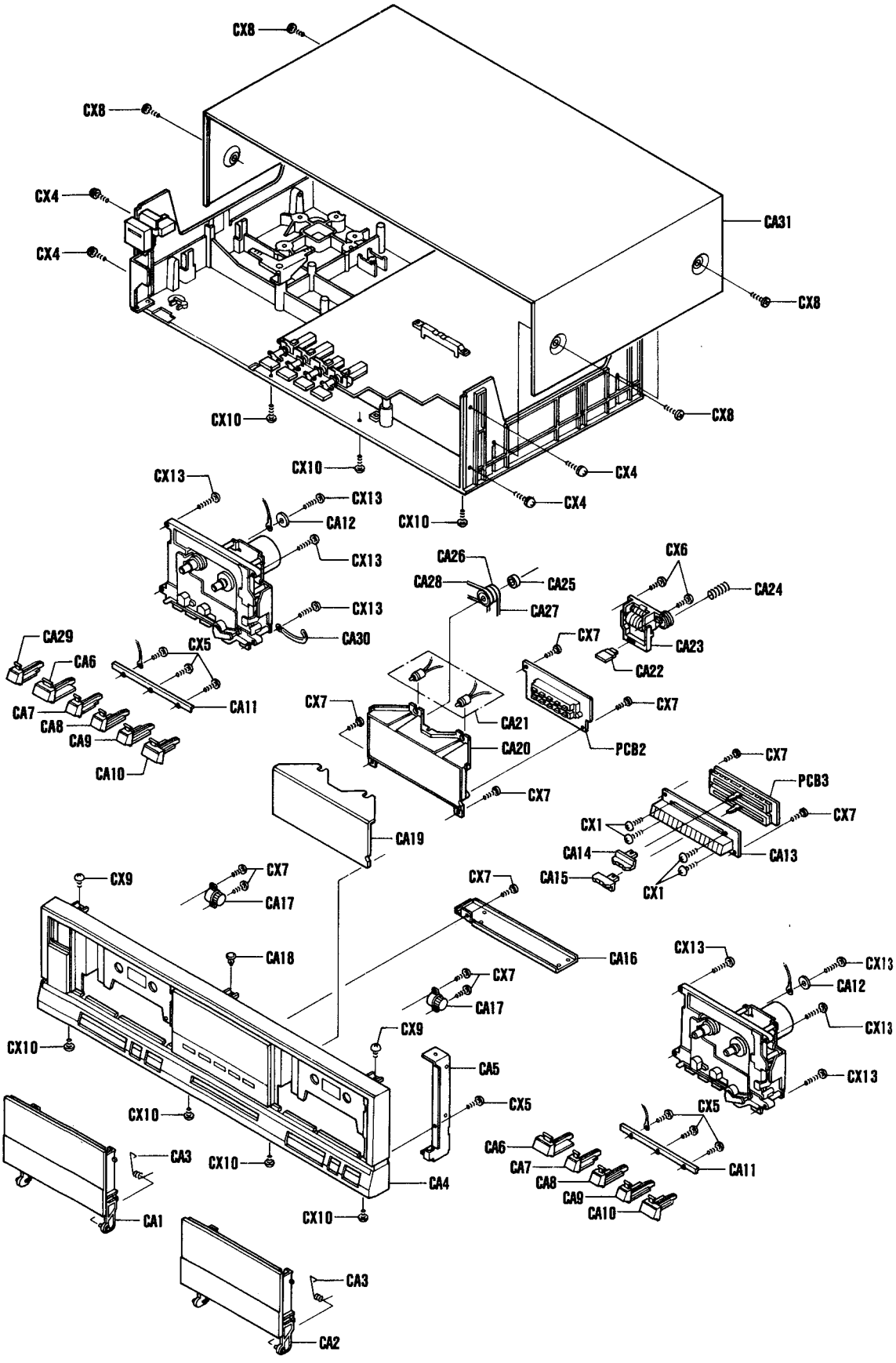
SPECIFICATIONS

CASSETTE DECK	CR-W47, CR-W147
Motor	(2) DC Governor
Cassette Loading	(2) Front
Drive System	(2) Capstan
Number of Heads	2 / 2
Head Material	Hard Permalloy / Ferrite
Operation	(2) Powered Mechanism
Wow & Flutter	0.06 % WRMS
Signal-to-Noise Ratio (CCIR Weighted) Dolby Off	51 dB
Dolby On	61 dB
Erase Ratio	70 dB
Channel Separation	40 dB
Signal Crosstalk	70 dB
Frequency Response (Dolby Off) Normal Tape (±3 dB)	40 Hz – 13 kHz
CrO_2 Equivalent Tape (±3 dB)	40 Hz – 14 kHz
Metal Tape (±3 dB)	40 Hz – 15 kHz
Total Harmonic Distortion at 0 VU	1.2 %
Fast Forward / Rewind Time (C-60)	110 sec.
Level Indicators	(2) L.E.D. Meters
Input (Sensitivity / Impedance)	(2) Line 100 mV / 50 kΩ
Output (Level at 0 VU / Impedance)	(2) Line 500 mV / 2.2 kΩ
Tape Select Button	Normal, CrO_2, Metal
Tape Counter	Mechanical
Power Requirements	16 V AC
Power Consumption	14 Watts
Dimensions (W x H x D)	440 x 125 x 260 mm
Weight (approx.)	3.4 kg

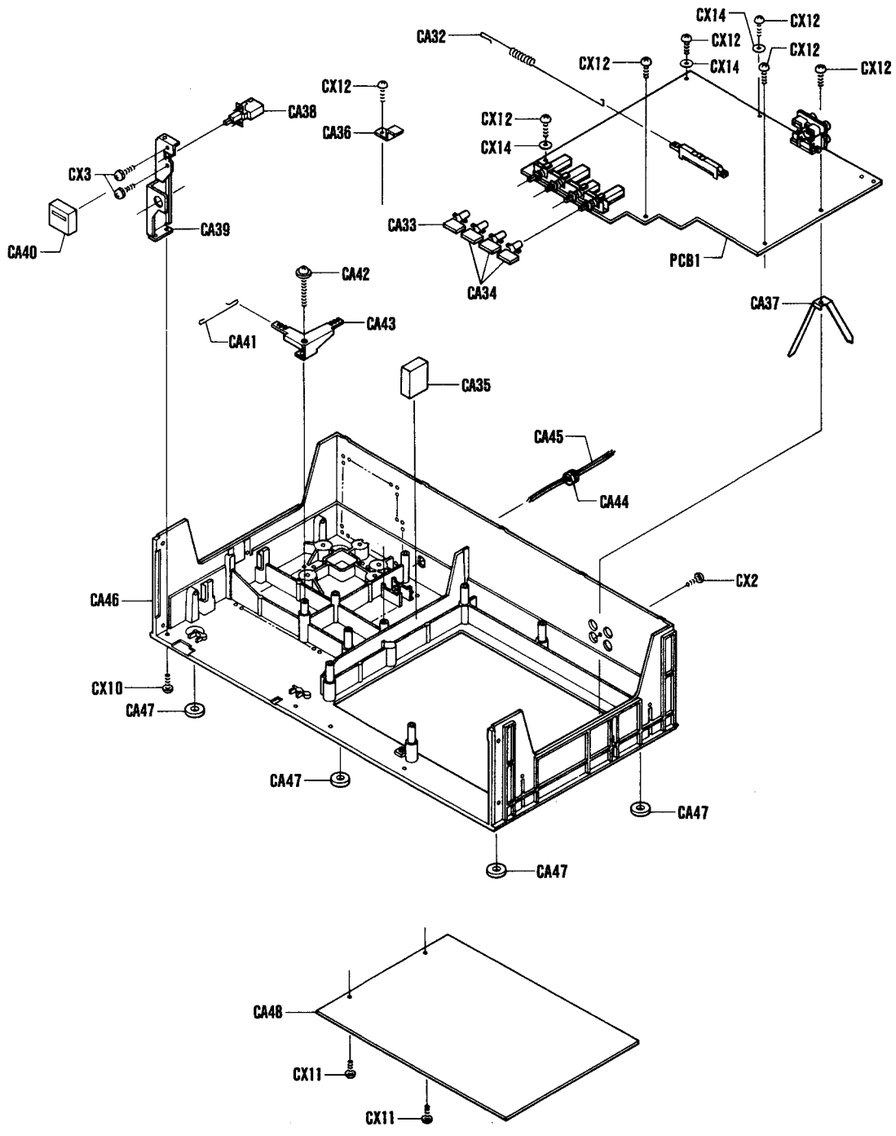
Dolby is registered trademark of Dolby Laboratories.

Because its products are subject to continuous improvement, Fisher Corporation reserves the right to modify product designs and specifications without notice and without incurring any obligation.

CABINET & CHASSIS EXPLODED VIEW



CABINET & CHASSIS EXPLODED VIEW (Continued)



CABINET & CHASSIS PARTS LIST

Ref. No.	Part No.	Description	Q'ty
	PACKAGE		
	-3-9415-10300	Bag Polyethylene	1
	131-6-2119-02090	Bag Polyethylene-exp	1
	131-6-3069-16350	Patching Sheet	1
	141-6-1419-81105	Individual Carton (CR-W47)	1
	141-6-1419-81108	Individual Carton (CR-W147)	1
	141-6-1469-01200	Pad Low	1
	141-6-1469-04100	Pad Left	1
	141-6-1469-04200	Pad Right	1
	141-6-1469-05100	Pad Top	1
	141-6-4559-03300	Serial No. Sheet	2
	ACCESSORIES		
	131-0-4004-15200	Wire Shield Assy	1
	131-0-4004-15201	Wire Shield Assy	1
	131-6-2719-10401	Bag Fan	1
	131-6-4519-15700	Guarantee Cert	1
	141-6-4559-03200	Serial No. Sheet	1
	142-6-4119-32483	Instruction Booklet (CR-W47)	1
	142-6-4119-32491	Instruction Booklet (CR-W147)	1
	CABINET		
	141-2-1419-13384	Rating Plate (CR-W47)	1
	141-2-1419-13388	Rating Plate (CR-W147)	1
	141-2-1419-16908	Rating Plate	1
	141-2-4729-07100	Wire Band	5
CA1	141-0-1249-33800	Lid Cassette Assy 1	1
CA2	141-0-1249-33801	Lid Cassette Assy 2	1
CA3	141-2-8529-25700	Spring Cassette-up	2
CA4	141-0-1129-09908	Cabinet Front Assy (CR-W47)	1
CA4	141-0-1129-09907	Cabinet Front Assy (CR-W147)	1
CA5	141-2-3169-25800	Bracket Side	1
CA6	141-2-1659-10400	Button Play	2
CA7	141-2-1659-10500	Button Rewind	2
CA8	141-2-1659-10600	Button FF	2
CA9	141-2-1659-10700	Button Pause	2
CA10	141-2-1659-10800	Button Eject	2
CA11	141-2-3519-71700	Plate Knob	2
CA12	131-2-4203-83219	Washer, Plain	2
CA13	141-2-3619-12100	Cover Volume	1
CA14	141-2-1649-30600	Knob Volume Left	1
CA15	141-2-1649-30700	Knob Volume Right	1
CA16	141-2-3169-25700	Bracket Center	1
CA17	141-0-5519-07903	Gear Eject Assy	2
CA18	131-2-4221-00600	Rivet	1
CA19	141-2-1329-16200	Clear Meter	1
CA20	141-0-1149-13100	Panel Meter Assy	1
CA21	4-6129-70661	Lamp (8V, 105mA)	1
CA22	141-2-1659-47400	Knob Reset	1
CA23	141-2-8119-14200	Counter	1
CA24	141-2-8559-11400	Spring Reset	1
CA25	141-2-5369-08200	Mold Ring	1
CA26	141-2-6619-02600	Pulley	1
CA27	141-2-5649-26300	Belt Counter	1
CA28	141-2-5649-14500	Belt Counter	1
CA29	141-2-1659-10300	Button Record	1
CA30	141-2-4729-04100	Lug	1
CA31	141-2-1119-83901	Cover	1
CA32	141-2-8549-08900	Spring R/P Switch	1
CA33	131-2-1601-80702	Knob	1
CA34	131-2-1601-80700	Knob	3
CA35	141-2-4469-52400	Cushion	1
CA36	141-2-3159-04100	Rein Force	1
CA37	141-2-8539-53200	Spring Erath	1
CA38	⚠ 4-2312-05030	Switch Push Power [S12]	1
CA39	141-2-3659-21100	Bracket Switch	1
CA40	131-2-1601-85203	Knob Power	1
CA41	141-2-4629-02300	Joint R/P	1
CA42	131-2-4201-25206	Screw, +M3.0x20	1
CA43	141-2-8419-15600	Lever Record	1
CA44	141-2-3899-10300	Heyco Bushing	1
CA45	4-2369-74063	Plug Cord	1
CA46	141-2-3119-17903	Chassis Cabinet	1
CA47	141-2-4469-22000	Cushion	4
CA48	141-2-2449-36000	Sheet	1
CX1	101-3-1302-00418	Screw, Pan Hd., +M2.0x4	4
CX2	102-3-1703-01218	Screw, Bind Hd. Tapp.-1 +M3.0x12	1
CX3	131-3-1303-00611	Screw, Pan Hd., C SW +M3.0x6	2
CX4	131-3-1303-00811	Screw, Pan Hd. C SW, +M3.0x8	4
CX5	143-3-1302-60611	Screw, Pan Hd. Tapping-B, +M2.6x6	7
CX6	143-3-1302-60811	Screw, Pan Hd. Tapping-B, +M2.6x8	2
CX7	143-3-1702-60811	Screw, Bind Hd. Tapping-B, +M2.6x8	11
CX8	143-3-1704-01218	Screw, Bind Hd. Tapping-B, +M4.0x12	4
CX9	143-3-1903-00511	Screw, Brazier Hd. Tapping-B, +M3.0x5	2
CX10	143-3-1903-00818	Screw, Brazier Hd. Tapping-B, +M3.0x8	8
CX11	143-3-1903-01011	Screw, Brazier Hd. Tapping-B, +M3.0x10	2
CX12	143-3-1903-01211	Screw, Brazier Hd. Tapping-B, +M3.0x12	7
CX13	143-3-1903-01611	Screw, Brazier Hd. Tapping-B, +M3.0x16	8
CX14	110-3-9321-00102	Washer, M3.2x10.0x1.0	3
PCB1	141-0-1939-09780	Amplifier P.C.B. Assy	1
PCB2	141-0-1939-09790	LED P.C.B. Assy	1
PCB3	141-0-1939-09800	Volume P.C.B. Assy	1

NOTES:

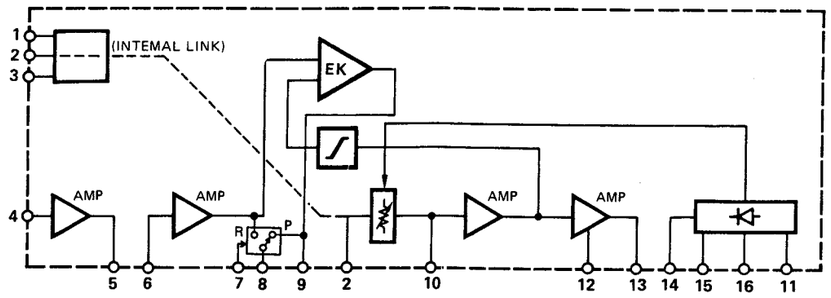
1. Parts order must contain Model Number, Part Number and Description.
2. Ordering quantity of screws and resistors must be multiple of 10 pcs.

PRODUCT SAFETY NOTICE

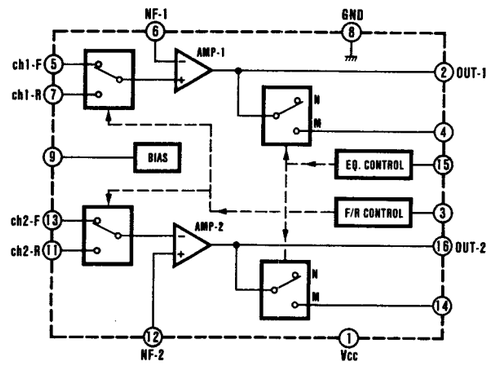
Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol ⚠ in the parts list and the schematic diagram designate components in which safety can be of special significance. When replacing a component identified with ⚠, use only the replacement parts designated, or parts with the same ratings of resistance, wattage or voltage that are designated in the parts list in this manual.
Leakage-current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.

IC SIGNAL FLOW & EQUIVALENT CIRCUIT

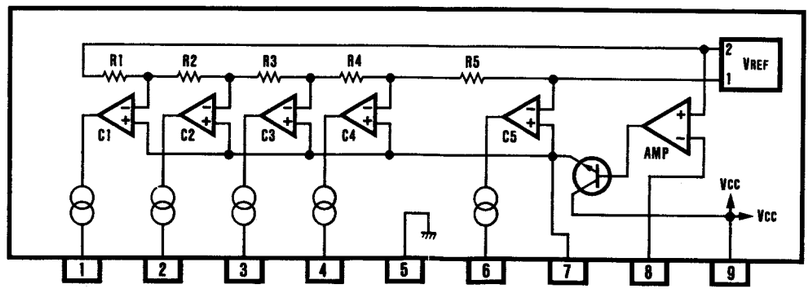
DOLBY IC TA 7629 P



AF AMP IC TA 7705 P

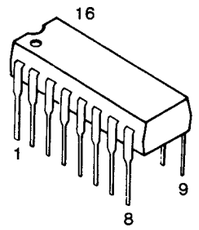


METER IC TA 7366 P

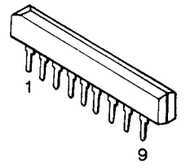


SEMICONDUCTOR LEAD IDENTIFICATION

INTEGRATED CIRCUITS

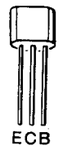


- TA 7629 P
- TA 7705 P

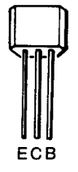


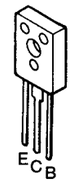
- TA 7366 P

BI-POLAR TRANSISTORS



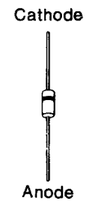
- 2SA 608
- 2SC 2274
- 2SC 3331
- 2SC 536





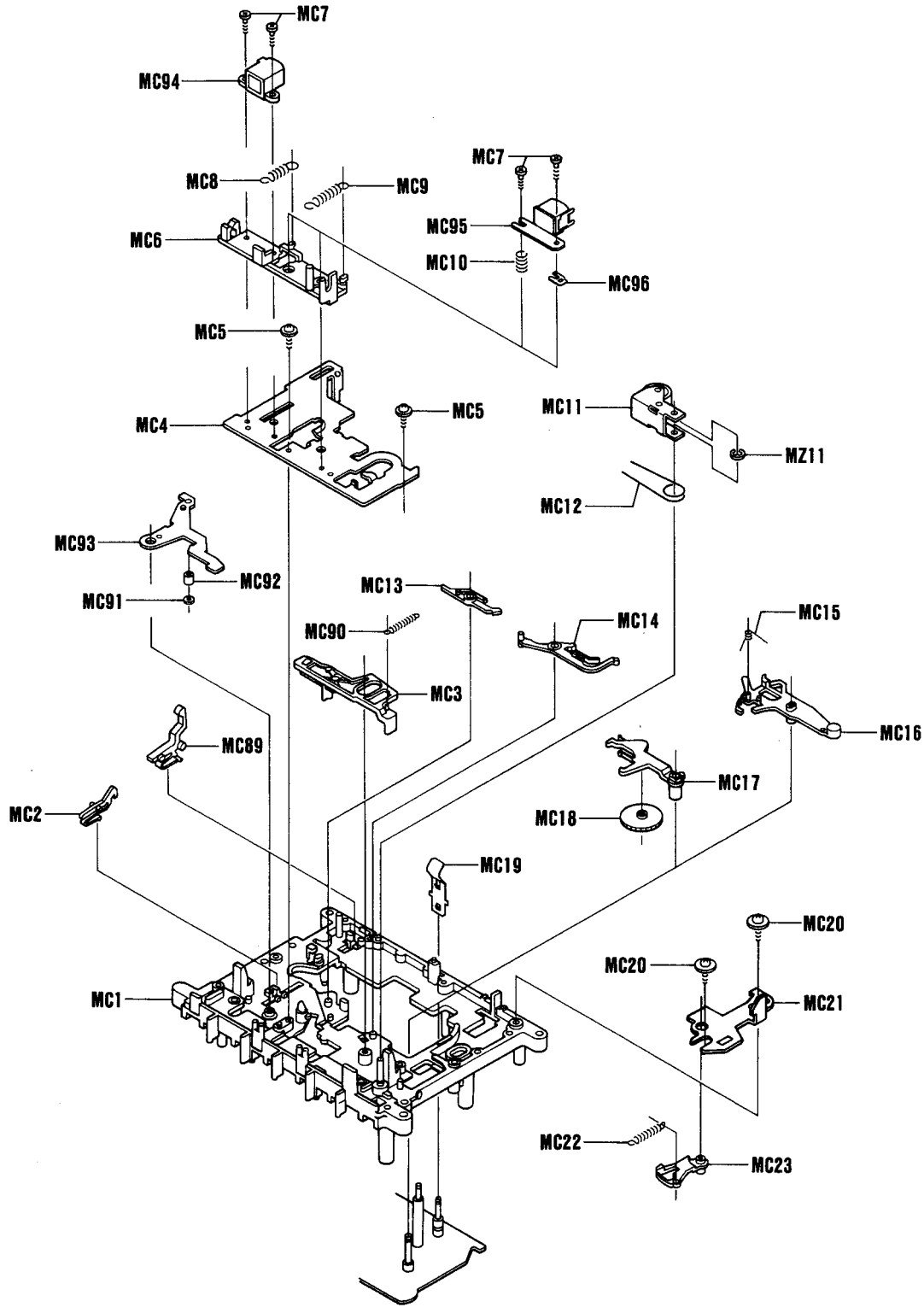
- 2SD 1012
- 2SC 1846

DIODES



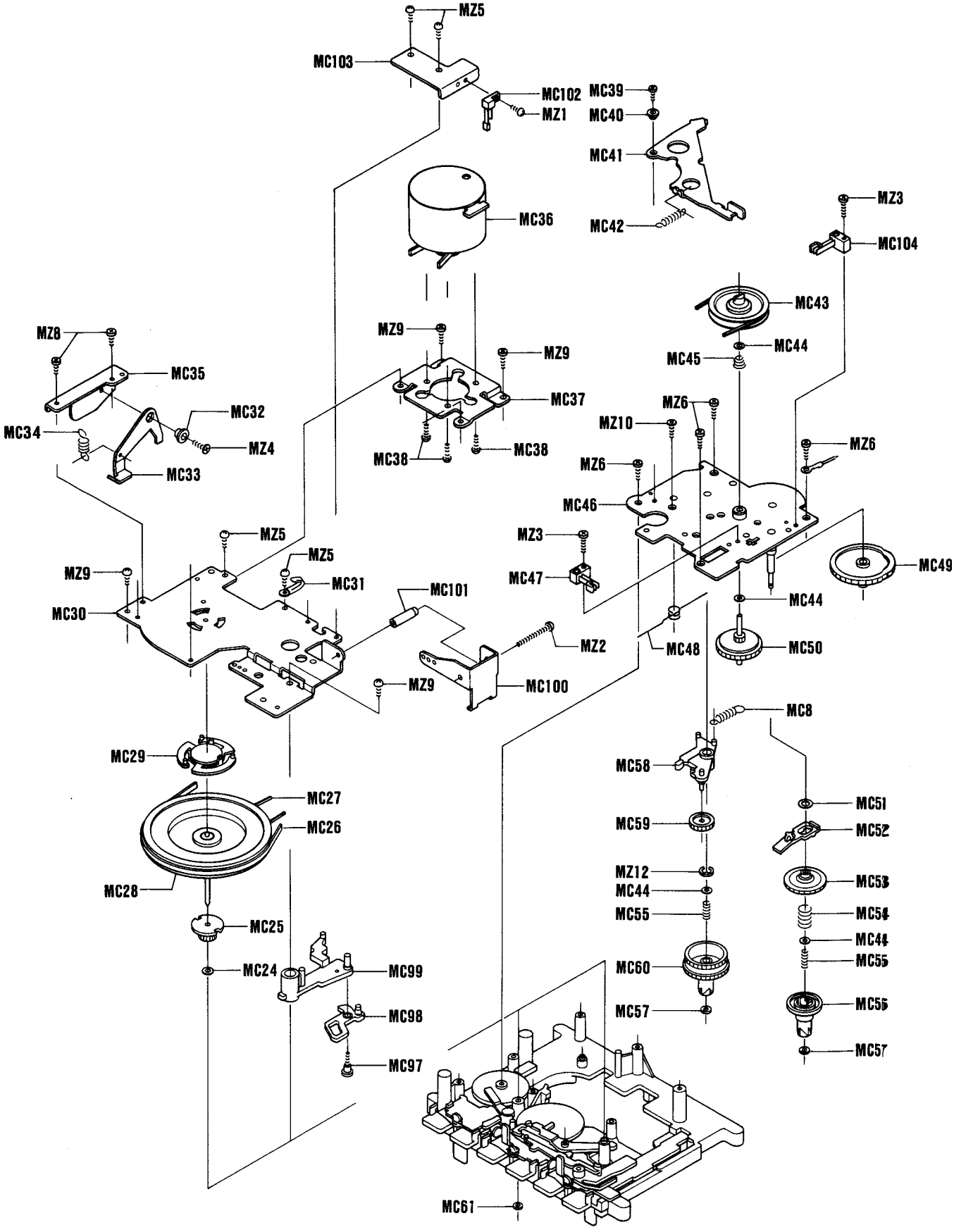
- DS 135 TD
- DS 442
- GZA 13 Z
- GZA 15 Z

MECHANISM EXPLODED VIEW
(DECK 1 TOP)



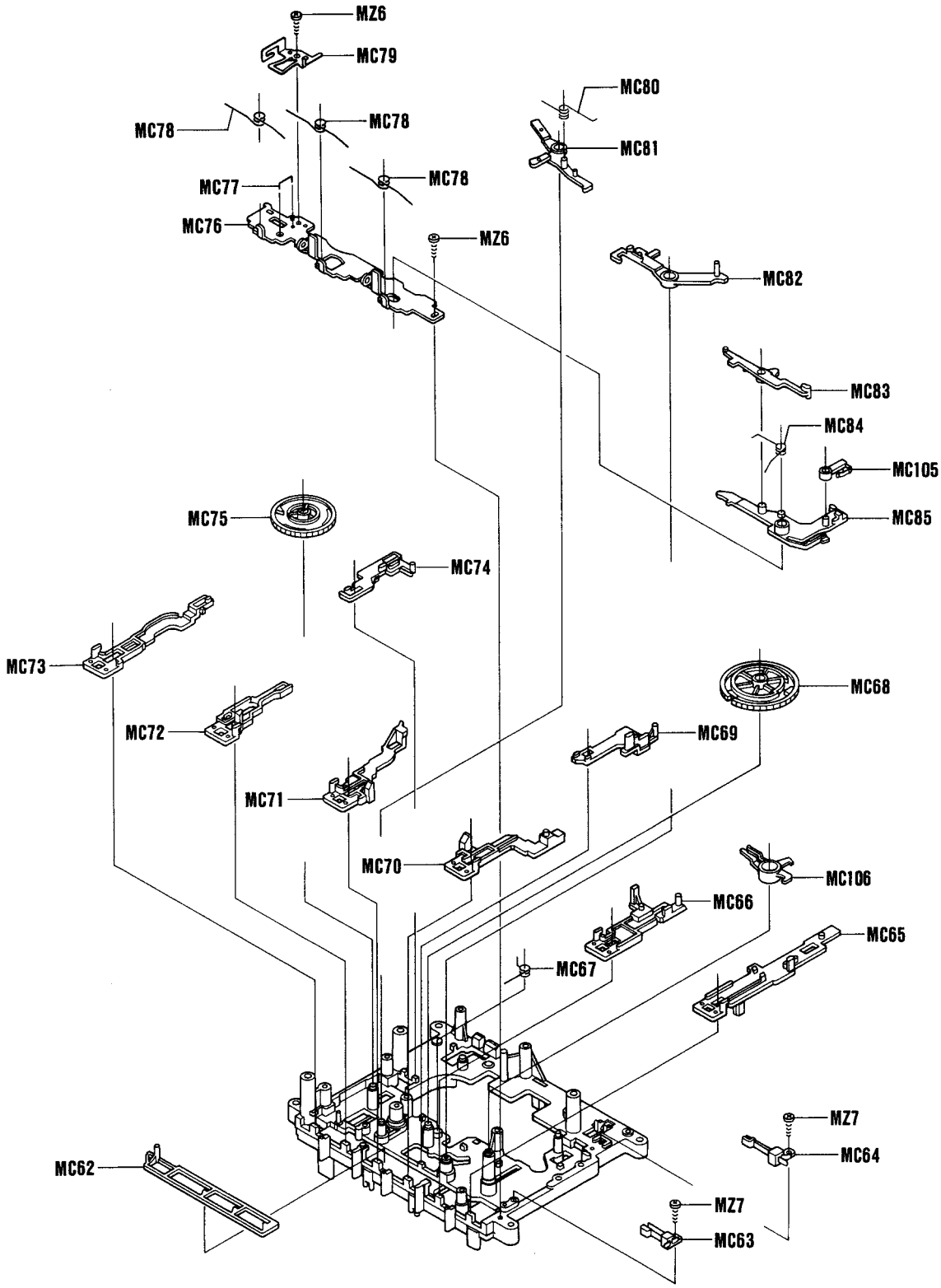
MECHANISM EXPLODED VIEW (Continued)

(DECK 1 BOTTOM-1)



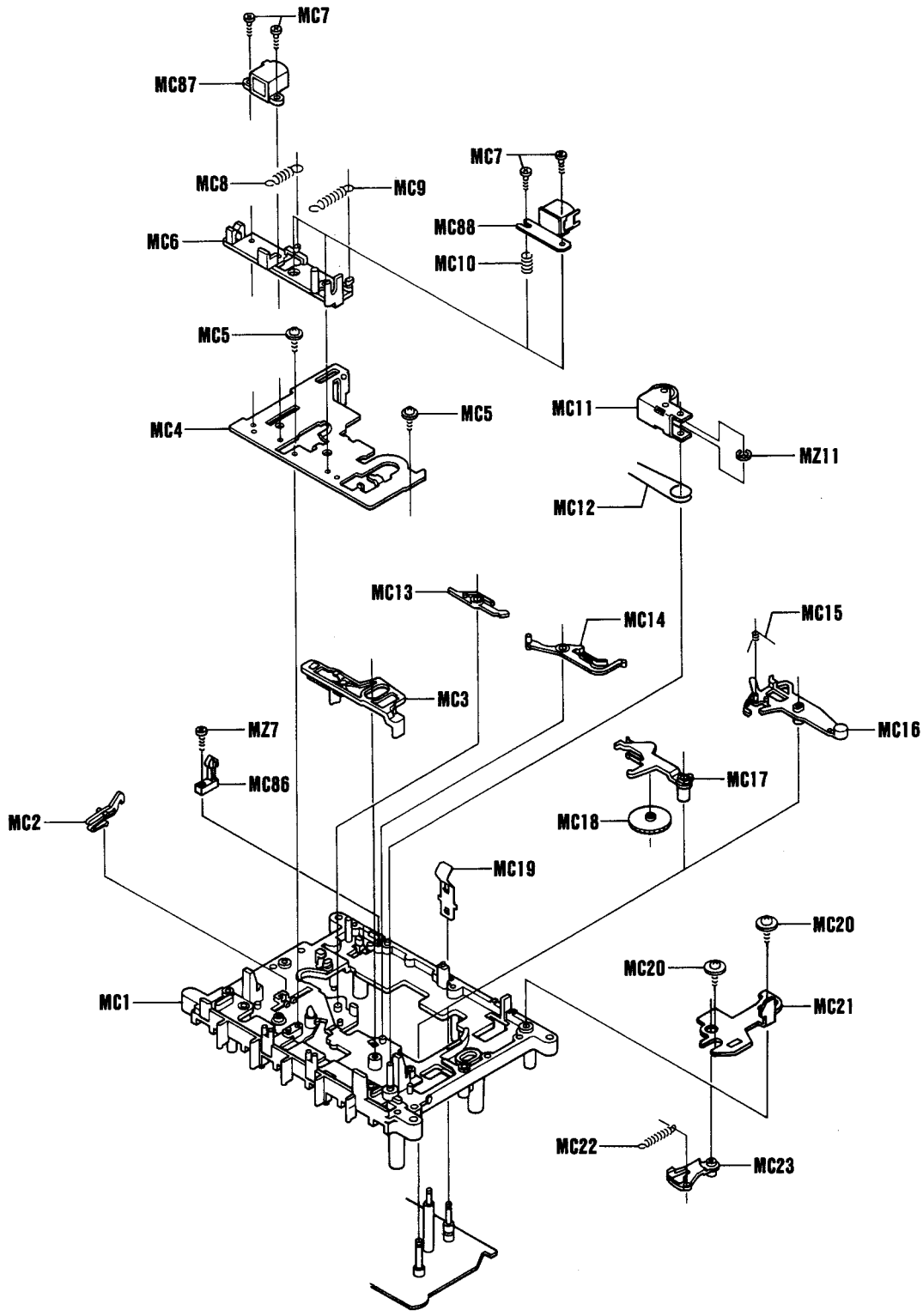
MECHANISM EXPLODED VIEW (Continued)

(DECK 1 BOTTOM-2)



MECHANISM EXPLODED VIEW (Continued)

(DECK 2 TOP)



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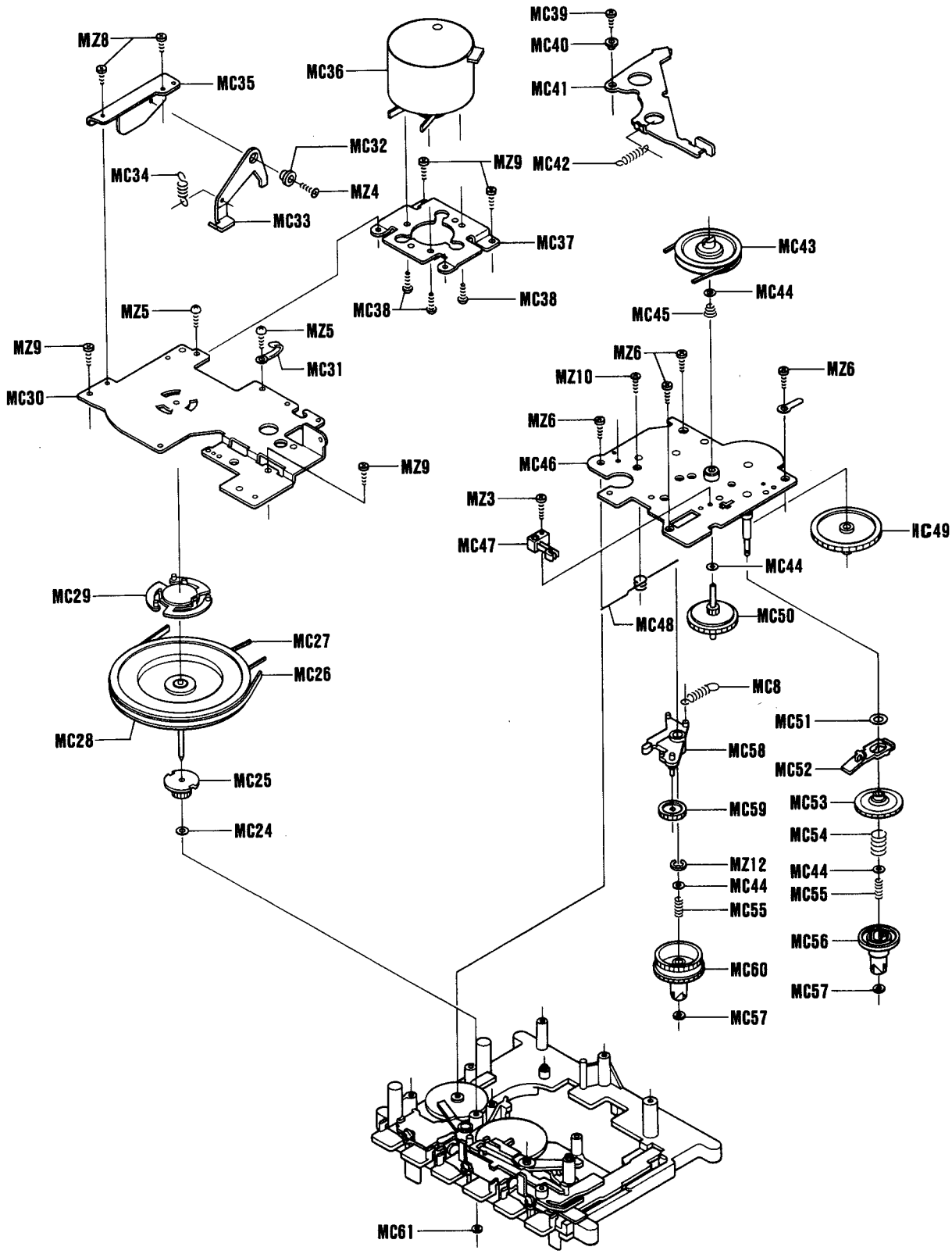
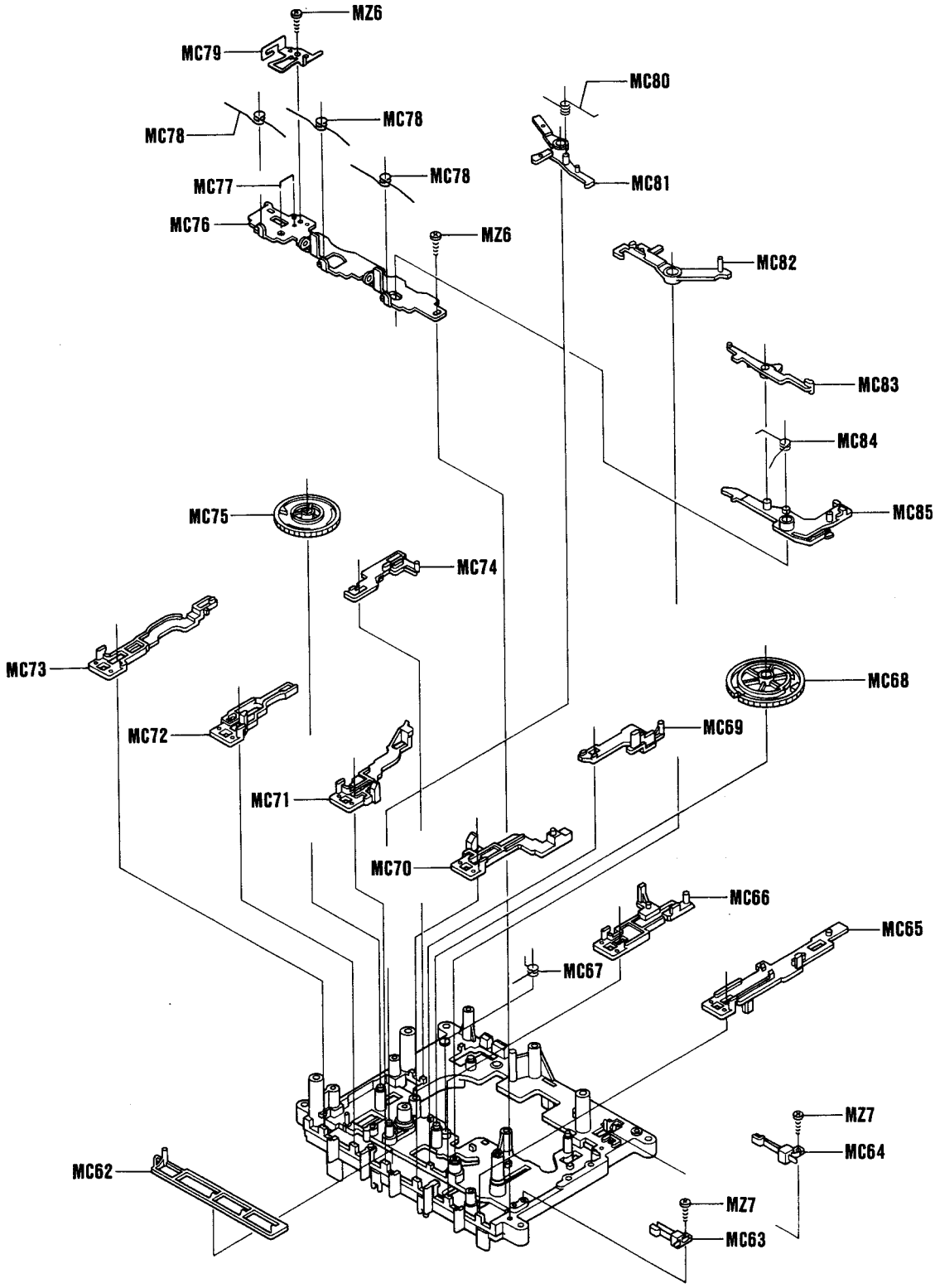
(DECK 2 BOTTOM-1)



MECHANISM EXPLODED VIEW (Continued)

(DECK 2 BOTTOM-2)



MECHANISM PARTS LIST

Ref. No.	Part No.	Description	Q'ty
	DECK 1 & DECK 2 SIMILAR PARTS		
MC1	141-0-3119-21900	Chassis Assy	2
MC2	141-2-7419-81300	Lever Cassette	2
MC3	141-2-7419-80700	Lever Base Slide	2
MC4	141-2-7319-52801	Base Slide	2
MC5	141-2-4219-13201	Screw Washer	4
MC6	141-2-3529-35900	Speacer Head	2
MC7	141-2-4219-30300	Screw, Bind Hd., +M2.0x6	8
MC8	141-2-8519-64900	Spring Arm Gear	4
MC9	141-2-8549-18700	Spring Slide Base	2
MC10	141-2-8559-00201	Spring Head	2
MC11	141-0-5419-02201	Pinchroller Assy	2
MC12	141-2-8529-12500	Spring Pinchroller	2
MC13	141-2-7149-05600	Brake Supply Reel	2
MC14	141-2-7149-05700	Brake Take-up Reel	2
MC15	141-2-8529-13200	Spring Sensor	2
MC16	141-2-7419-80100	Lever ASO	2
MC17	141-2-7439-30100	Arm Take-up	2
MC18	141-2-5519-45300	Gear Take-up	2
MC19	141-2-8539-47901	Spring Cassette	2
MC20	141-2-4219-05400	Screw Washer	4
MC21	141-2-7319-59300	Plate Eject	2
MC22	141-2-8549-18500	Spring Eject	2
MC23	141-2-7419-81100	Lever Stop Eject	2
MC24	141-2-4539-20900	Washer	2
MC25	141-2-5519-45200	Gear Flywheel	2
MC26	141-2-5619-01800	Belt	2
MC27	141-2-5649-21200	Belt Wind	2
MC28	141-2-5219-15000	Flywheel Capstan	2
MC29	141-2-5739-06100	Thrust Flywheel	2
MC30	141-2-3519-61400	Support Flywheel	2
MC31	141-2-4729-04100	Lug	2
MC32	141-2-3529-16000	Spacer Lever Select	2
MC33	141-2-7419-88901	Lever Eject	2
MC34	141-2-8549-00600	Spring Lever Eject	2
MC35	141-2-3519-68500	Bracket Eject	2
MC36	141-0-3799-01100	Pulley Motor Assy [M1 & M2]	2
MC37	141-2-3519-61500	Bracket Motor	2
MC38	141-2-4219-17900	Screw, Pan Hd., +M2.6x2.7	6
MC39	141-2-4219-03000	Screw	2
MC40	141-2-3529-36100	Spacer Lever	2
MC41	141-2-7419-82800	Lever Shut Off Switch	2
MC42	141-2-8519-61100	Spring Slide	2
MC43	141-2-5519-45700	Pulley Friction	2
MC44	141-2-4539-27601	Washer	8
MC45	141-2-8559-04700	Spring Pulley	2
MC46	141-0-3119-21800	Plate Chassis Assy	2
MC47	4-2319-74362	Leaf Switch (Motor) [S9 & S10]	2
MC48	141-2-8529-12700	Spring Arm FF	2
MC49	141-2-5519-45600	Gear ASO	2
MC50	141-0-5519-09600	Friction Assy	2
MC51	141-2-4539-28001	Washer	2
MC52	141-2-7419-80200	Lever Rewind	2
MC53	141-2-5319-11600	Gear Reel Supply	2
MC54	141-2-8519-67900	Spring Reel	2
MC55	141-2-8559-00100	Spring Supply	4
MC56	141-2-5319-11700	Fin Reel Supply	2
MC57	141-2-4539-15700	Washer	4
MC58	141-2-7439-30000	Arm Fastwind	2
MC59	141-2-5519-45100	Gear Fastwind	2
MC60	141-2-5319-11500	Gear Reel Take-up	2
MC61	141-2-4539-17600	Washer	2
MC62	141-2-7319-53600	Plate Lock	2
MC63	4-2319-71863	Leaf Switch (F.F/Rew) [S4 & S6]	2
MC64	4-2319-74550	Leaf Switch (Play Mute) [S3 & S7]	2
MC65	141-2-7319-53500	Rod Record	2
MC66	141-2-7319-53400	Rod Play	2
MC67	141-2-8529-12600	Spring Gear Actuate Play	2
MC68	141-2-5519-45900	Gear Actuate Play	2
MC69	141-2-7319-52900	Rod Switch	2
MC70	141-2-7319-53300	Rod Rewind	2
MC71	141-2-7319-53200	Rod Fastwind	2
MC72	141-2-7319-53100	Rod Pause	2
MC73	141-2-7319-53000	Rod Stop	2
MC74	141-2-7319-54900	Rod ASO	2
MC75	141-2-5519-45800	Gear Actuate Pause	2
MC76	141-2-6139-14300	Frame Rod	2
MC77	141-2-8529-12800	Spring Pause Latch	2
MC78	141-2-8529-12401	Spring Rod FF	6
MC79	141-2-8539-46700	Spring Plate Lock	2
MC80	141-2-8529-13300	Spring Lever Pause	2
MC81	141-2-7419-80600	Lever Pause Start	2
MC82	141-2-7419-80500	Lever Play Start	2
MC83	141-2-7419-80800	Lever Switch Cue Review	2
MC84	141-2-8529-14200	Spring Stop Record	2
MC85	141-2-7419-81000	Lever Stop Record	2
MZ1	101-3-1302-00311	Screw, Pan Hd., +M2.0x3	1
MZ2	101-3-1302-62011	Screw, Pan Hd., +M2.6x20	1
MZ3	101-3-1702-00811	Screw, Bind Hd., +M2.0x8	3
MZ4	101-3-1202-60611	Screw, Flat Hd., +M2.6x6	2
MZ5	103-3-1302-60511	Screw, Pan Hd. Tapp.-2, +M2.6x5	6
MZ6	143-3-1702-00618	Screw, Bind Hd. Tapp.-B, +M2.0x6	12
MZ7	143-3-1702-00818	Screw, Bind Hd. Tapp.-B, +M2.0x8	5
MZ8	143-3-1702-60611	Screw, Bind Hd. Tapp.-B, +M2.6x6	4
MZ9	143-3-1702-60818	Screw, Bind Hd. Tapp.-B, +M2.6x8	8
MZ10	143-3-1202-00818	Screw, Flat Hd. Tapp.-B, +M2.0x8	2
MZ11	112-3-1302-00082	E Ring, M2.0	2
MZ12	112-3-1303-00082	E Ring, M3.0	2
	DECK 2 ONLY		
MC86	4-2319-75860	Leaf Switch (CrO_2) [S5]	1
MC87	4-2422-00231	Erase Head Dummy	1
MC88	4-2429-72340	Play Head [HD1]	1
	DECK 1 ONLY		
MC89	141-2-8419-11700	Interlock Lever	1
MC90	141-2-8549-05500	Spring Lever Stop	1
MC91	141-2-4539-17500	Washer	1
MC92	141-2-8259-11100	Roller Rec	1
MC93	141-0-7419-36900	Lever Rec Base Assy	1
MC94	4-2429-71880	Erase Head [HD3]	1
MC95	4-2429-72350	R/P Head [HD2]	1
MC96	141-2-3529-18101	Spacer Head	1
MC97	141-2-4219-23000	Screw	1
MC98	141-2-7419-81200	Lever Rec Select	1
MC99	141-2-7419-81400	Arm Record	1
MC100	141-2-8419-14900	Lever R/P Switch	1
MC101	141-2-7539-61600	Post Lever R/P Switch	1
MC102	4-2319-74170	Leaf Switch (Record) [S11]	1
MC103	141-2-3659-20400	Bracket Switch	1
MC104	4-2319-74360	Leaf Switch (OSC) [S8]	1
MC105	141-2-7419-80900	Lever Spring Stop Rec	1
MC106	141-2-7419-80400	Lever Lock Record	1

CASSETTE DECK ELECTRICAL ADJUSTMENTS

BEFORE ADJUSTMENT

If the tape surface whitch contacts the head, the capstan, and the pinch roller, etc., is stained, it will cause unstable running of the tape, wow and flutter, imperfect recording and erasing, deterioration of tonal quality, and the tape jam around the capstan, etc. Occasionally clean each part as follows;

1. Cut off power.
2. Open the cassette lid.
3. Wipe the head, the capstan, and the pinch roller wiht a cotton swab. If they are excessively stained, clean them with the swab soaked in absolute alcohol or cleaning liquid on the market.

MEASURING INSTRUMENTS REQUIRED

- Dualtrace Oscilloscope
- AC VTVM (AC voltmeter with high impedance)
- Dummy Load (47kΩ)
- Frequency Counter
- Signal Oscillator
- Test Tapes
  - ‡ 10kHz Test Tape (Example: TEAC MTT-114) for Azimuth Adjustment
  - ‡ 3kHz Test Tape (Example: TEAC MTT-111) for Tape Speed Adjustment
  - ‡ Test Taped (Example: TEAC MTT-150) for Playback sensitivity Adjustment
- Test Tapes for Recording and Playback Operations
  - ‡ CrO_2 Tape (Example: TDK AC 512)
  - ‡ Normal Tape (Example: TDK AC 223)
  - ‡ Metal Tape (Example: TDK AC 711)

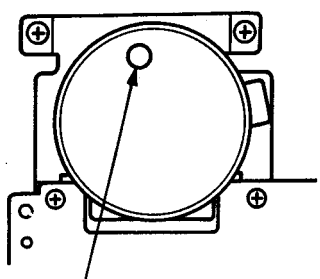
SWITCH POSITIONS

Unless especially indicated, set each switch as follows;

TAPE SELECTOR Switch ..... NORMAL
DOLBY NR Switch ..... OFF
SYNCHRO START Switch ..... SEQ. PLAY

TAPE SPEED ADJUSTMENT

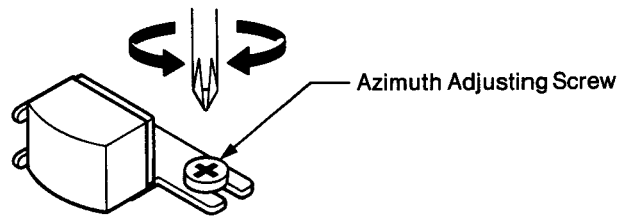
1. Connect the dummy load (47kΩ) and the frequency counter to the LINE OUT terminal L.
2. Load Deck 1 with a test tape (Example: TEAC MTT-111) and set it in the playback mode.
3. Adjust the potentiometer inside the capstan drive motor, so that the output becomes 3000Hz ±10Hz.
4. Perform the same adjustment for Deck 2.



Tape Speed Adjusting Potentiometer

HEAD AZIMUTH ADJUSTMENT

1. Connect the dummy load (47kΩ) and the dualtrace oscilloscope to the LINE OUT terminals L and R.
2. Load Deck 1 with a test tape (Example: TEAC MTT-114) and set it in the playback mode.
3. Adjust the azimuth adjustment screw, so that the wave forms become maximum on the oscilloscope and the right wave form overlaps with the left one.
4. Perform the same adjustment for Deck 2.



Azimuth Adjusting Screw

PLAYBACK SENSITIVITY ADJUSTMENT

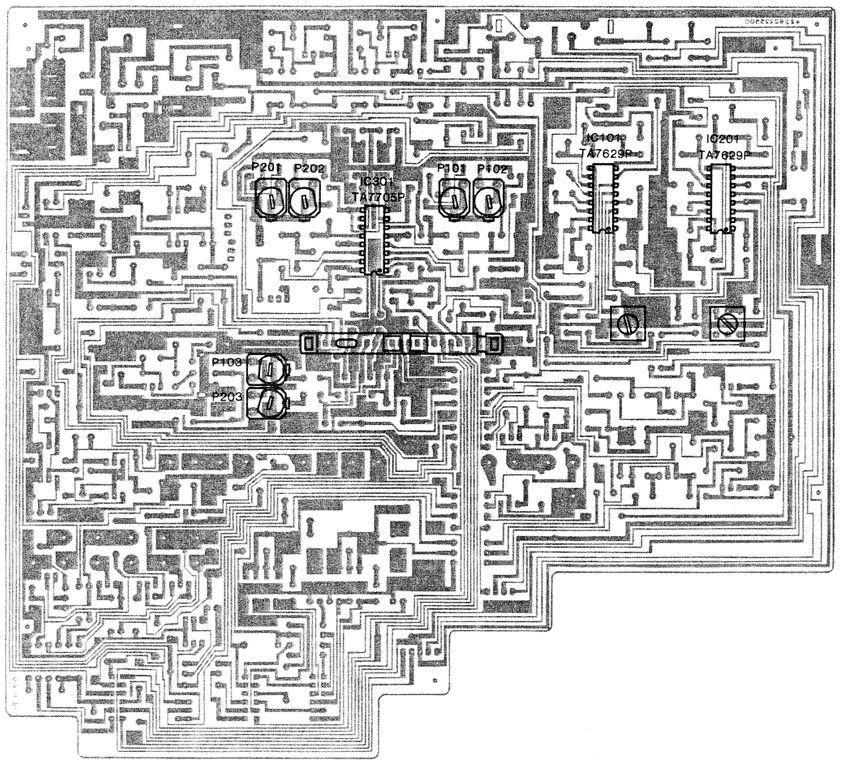
1. Conncet the dummy load (47kΩ) and AC VTVM to the LINE OUT terminal L.
2. Load Deck 2 with a test tape (Example: TEAC MTT-150) and set it in the playback mode.
3. Adjust P101, so that the output of LINE OUT becomes 500mV.
4. Connect AC VTVM to the LINE OUT terminal R and adjust P201, so that the output becomes 500mV.
5. Load Deck 2 with a test tape (Example: TEAC MTT-150) and set it in the playback mode.
6. Adjust P102 (L) and P202 (R) in the same method as explained on Deck 1, so that the output becomes 500mV.

BIAS ADJUSTMENT

1. Connect the low frequency oscillator to the L side of the LINE IN terminal, and the dummy load (47kΩ) and AC VTVM to the L side of the LINE OUT terminal.
2. Load Deck 1 with a normal tape (Example: TDK AC223) and set it in the recording mode.
3. Set the Input Level volume control to the maximum position and feed the signals of 1kHz and 12kHz at 7mV from the frequency generator into the unit. Then, record the signals on the tape.
4. Play back the recorded signals adjust P103, so that the difference in output of the 1kHz and 12kHz signals become ±0.5dB.
5. Adjust P203 for the R side by following the same procedures as described for the L side.

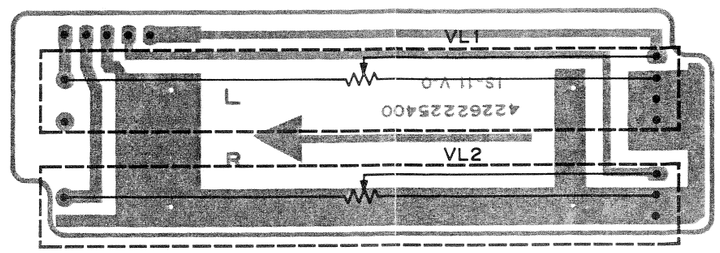
AMPLIFIER P.C.BOARD ALIGNMENT POINTS

(TOP VIEW)



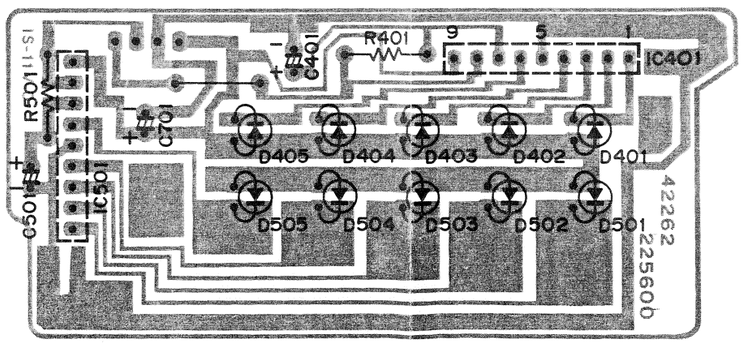
VOLUME P.C.BOARD

(BOTTOM VIEW)

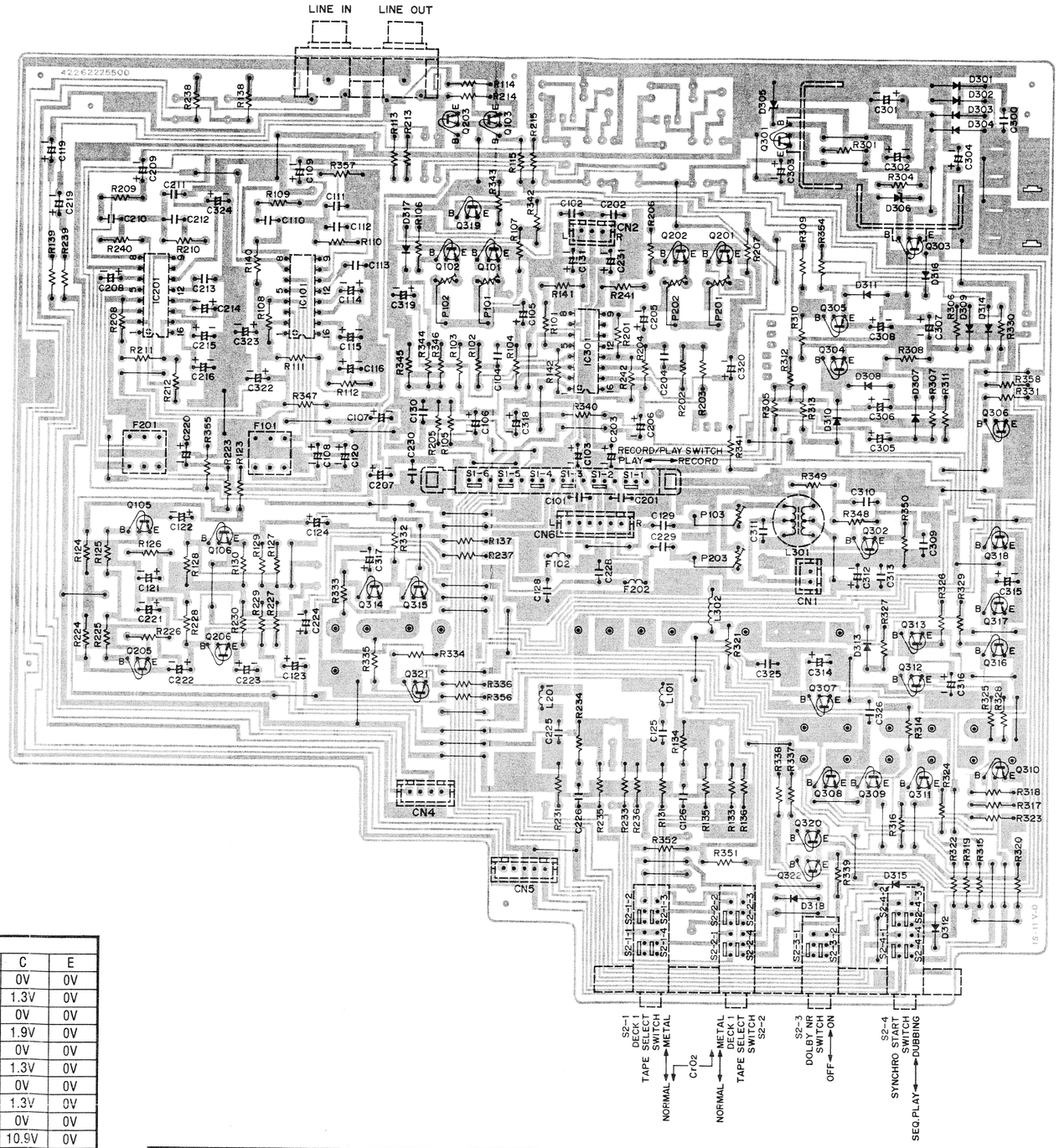


LED P.C.BOARD

(BOTTOM VIEW)



AMPLIFIER P.C.BOARD



TRANSISTOR DC VOLTAGES (* = REC Mode)

SYMBOL No.	DEVICE	B	C	E	SYMBOL No.	DEVICE	B	C	E
Q101,201	2SC3331	0.7V	0V	0V	Q310	2SC536	0.7V	0V	0V
Q102,202	2SC3331	10.8V	0V	0V	Q311	2SC536	0V	1.3V	0V
Q103,203	2SD1012	0.7V	0V	0V	Q312	2SC536	0.7V	0V	0V
Q105,205	2SC3331	0.7V	0V	0V	Q313	2SC536	0V	1.9V	0V
Q106,206	2SC3331	1.9V	4.4V	1.3V	Q314	2SC536	0.7V	0V	0V
Q301	2SC1846	15.5V	21.2V	14.8V	Q315	2SC536	0V	1.3V	0V
* Q302	2SC2274	0.6V	6.3V	0.2V	Q316	2SC536	0.7V	0V	0V
Q303	2SC1846	13.9V	21.2V	13.3V	Q317	2SC536	0V	1.3V	0V
Q304	2SC536	0.7V	0.3V	0V	Q318	2SC536	0V	0V	0V
Q305	2SA608	0.3V	14.2V	14.2V	Q319	2SC536	0.7V	10.9V	0V
Q306	2SC536	0V	0.7V	0V	Q320	2SC536	0.7V	0V	0V
Q307	2SD1012	0.2V	11.9V	0V	Q321	2SC536	0.7V	12.4V	0V
Q308	2SD1012	0.2V	0.3V	0V	Q322	2SC536	0.7V	0V	0V
Q309	2SD1012	0.7V	0V	0V					

IC PIN NUMBERS DC VOLTAGES

SYMBOL No.	DEVICE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
IC101,201	TA7629P	12.1V	6.1V	0V	6.0V	5.9V	6.1V	6.2V	6.8V	6.0V	6.1V	10.3V	6.1V	0.2V	6.5V	7.1V	9.1V
IC301	TA7705P	9.6V	2.6V	1.8V	2.6V	2.8V	2.8V	2.8V	0V	2.8V	0.2V	0.2V	2.8V	2.8V	0.2V	0.2V	0.2V

P.C.BOARD PARTS LIST

Ref. No.	Part No.	Description	Q'ty
	AMPLIFIER P.C.B. ASSY		
PCB1	141-0-1939-09780	Amplifier P.C.B. Assy	1
	131-2-6201-28000	Plate Heat Sink	2
	143-3-1903-00811	Screw, Brazier Hd. Tapping-B, +M3.0x8	2
	4-2369-73780	RT Pin 1P	22
	4-2372-00830	EC Terminal 1P	2
CN1	4-2362-00770	Plug 2P	1
CN2	4-2369-73130	Connector 3P	1
CN4	4-2362-00840	Plug 4P	1
CN5	4-2362-00780	Plug 5P XH	1
CN6	4-2362-00850	Plug 6P	1
F101	4-2522-00170	AF Filter	1
F102	4-2729-70630	Coil Trap	1
F201	4-2522-00170	AF Filter	1
F202	4-2729-70630	Coil Trap	1
J1	4-2359-75361	4P Pin Jack	1
S1	4-2319-75950	Slide Switch	1
S2	4-2319-77950	Switch Push 4 Key	1
L101	4-2552-00610	AF Coil	1
L201	4-2552-00610	AF Coil	1
L301	4-2729-70621	Coil OSC	1
L302	4-2532-00040	Choke Coil 1mH	1
P101	4-2222-01490	Semi-fixed (B-500Ω)	1
P102	4-2222-01490	Semi-fixed (B-500Ω)	1
P103	4-2229-72971	Potentiometer (B-100kΩ)	1
P201	4-2222-01490	Semi-fixed (B-500Ω)	1
P202	4-2222-01490	Semi-fixed (B-500Ω)	1
P203	4-2229-72971	Potentiometer (B-100kΩ)	1
D301	202-5-2540-13552	Diode, DS135TD-KB3	1
D302	202-5-2540-13552	Diode, DS135TD-KB3	1
D303	202-5-2540-13552	Diode, DS135TD-KB3	1
D304	202-5-2540-13552	Diode, DS135TD-KB3	1
D305	202-5-3210-15013	Zener Diode, GZA 15Z	1
D306	202-5-3210-13013	Zener Diode, GZA 13Z	1
D307	202-5-2810-44210	Diode, DS 442	1
D308	202-5-2810-44210	Diode, DS 442	1
D309	202-5-2810-44210	Diode, DS 442	1
D310	202-5-2810-44210	Diode, DS 442	1
D311	202-5-2810-44210	Diode, DS 442	1
D312	202-5-2810-44210	Diode, DS 442	1
D313	202-5-2810-44210	Diode, DS 442	1
D314	202-5-2810-44210	Diode, DS 442	1
D315	202-5-2810-44210	Diode, DS 442	1
D316	202-5-2810-44210	Diode, DS 442	1
D317	202-5-2810-44210	Diode, DS 442	1
D318	202-5-2810-44210	Diode, DS 442	1
IC101	4-2069-71410	IC, TA 7629 P	1
IC201	4-2069-71410	IC, TA 7629 P	1
IC301	4-2069-74290	IC, TA 7705 P	1
Q101	203-5-5083-33165	Transistor, 2SC 3331	1
Q102	203-5-5083-33165	Transistor, 2SC 3331	1
Q103	203-5-4921-01260	Transistor, 2SD 1012	1
Q105	203-5-5083-33165	Transistor, 2SC 3331	1
Q106	203-5-5083-33165	Transistor, 2SC 3331	1
Q201	203-5-5083-33165	Transistor, 2SC 3331	1
Q202	203-5-5083-33165	Transistor, 2SC 3331	1
Q203	203-5-4921-01260	Transistor, 2SD 1012	1
Q205	203-5-5083-33165	Transistor, 2SC 3331	1
Q206	203-5-5083-33165	Transistor, 2SC 3331	1
Q301	4-2039-70600	Transistor, 2SC 1846	1
Q302	203-5-7252-27450	Transistor, 2SC 2274	1
Q303	4-2039-70600	Transistor, 2SC 1846	1
Q304	203-5-5100-53660	Transistor, 2SC 536	1
Q305	203-5-7200-60860	Transistor, 2SA 608	1

Ref. No.	Part No.	Description			Q'ty
Q306	203-5-5100-53660	Transistor, 2SC 536			1
Q307	203-5-4921-01260	Transistor, 2SD 1012			1
Q308	203-5-4921-01260	Transistor, 2SD 1012			1
Q309	203-5-4921-01260	Transistor, 2SD 1012			1
Q310	203-5-5100-53660	Transistor, 2SC 536			1
Q311	203-5-5100-53660	Transistor, 2SC 536			1
Q312	203-5-5100-53660	Transistor, 2SC 536			1
Q313	203-5-5100-53660	Transistor, 2SC 536			1
Q314	203-5-5100-53660	Transistor, 2SC 536			1
Q315	203-5-5100-53660	Transistor, 2SC 536			1
Q316	203-5-5100-53660	Transistor, 2SC 536			1
Q317	203-5-5100-53660	Transistor, 2SC 536			1
Q318	203-5-5100-53660	Transistor, 2SC 536			1
Q319	203-5-5100-53660	Transistor, 2SC 536			1
Q320	203-5-5100-53660	Transistor, 2SC 536			1
Q321	203-5-5100-53660	Transistor, 2SC 536			1
Q322	203-5-5100-53660	Transistor, 2SC 536			1
C101	CC6-8-1500-KD00C	Ceramic	680pF	50V ±10%	1
C102	CC6-8-1500-KD00C	Ceramic	680pF	50V ±10%	1
C103	CD4-7-5250-0001V	Electrolytic	4.7μF	25V	1
C104	CM1-8-3500-K00SV	Mylar	0.018μF	50V ±10%	1
C105	CD3-3-663A-0001V	Electrolytic	33μF	6.3V	1
C106	CD1-0-6160-0001V	Electrolytic	10μF	16V	1
C107	CD4-7-4500-0001V	Electrolytic	0.47μF	50V	1
C108	CD1-0-6160-0001V	Electrolytic	10μF	16V	1
C109	CD4-7-5250-0001V	Electrolytic	4.7μF	25V	1
C110	CM5-6-2500-K00SV	Mylar	0.0056μF	50V ±10%	1
C111	CM2-7-3500-K00SV	Mylar	0.027μF	50V ±10%	1
C112	CM4-7-2500-K00SV	Mylar	0.0047μF	50V ±10%	1
C113	CM4-7-3500-K00SV	Mylar	0.047μF	50V ±10%	1
C114	CD1-0-6160-0001V	Electrolytic	10μF	16V	1
C115	CD1-0-4500-0001V	Electrolytic	0.1μF	50V	1
C116	CD3-3-4500-0001V	Electrolytic	0.33μF	50V	1
C119	CD1-0-5500-0001V	Electrolytic	1μF	50V	1
C120	CD4-7-5250-0001V	Electrolytic	4.7μF	25V	1
C121	CD1-0-5500-0001V	Electrolytic	1μF	50V	1
C122	CD4-7-4500-0001V	Electrolytic	0.47μF	50V	1
C123	CD1-0-6160-0001V	Electrolytic	10μF	16V	1
C124	CD1-0-5500-0001V	Electrolytic	1μF	50V	1
C125	CM1-5-3500-K00SV	Mylar	0.015μF	50V ±10%	1
C126	CM3-9-3500-K00SV	Mylar	0.039μF	50V ±10%	1
C128	CC4-7-1500-KD00C	Ceramic	470pF	50V ±10%	1
C129	CC2-2-1500-KD00C	Ceramic	220pF	50V ±10%	1
C130	CC8-2-0500-KD00C	Ceramic	82pF	50V ±10%	1
C131	CD4-7-5250-0001V	Electrolytic	4.7μF	25V	1
C201	CC6-8-1500-KD00C	Ceramic	680pF	50V ±10%	1
C202	CC6-8-1500-KD00C	Ceramic	680pF	50V ±10%	1
C203	CD4-7-5250-0001V	Electrolytic	4.7μF	25V	1
C204	CM1-8-3500-K00SV	Mylar	0.018μF	50V ±10%	1
C205	CD3-3-663A-0001V	Electrolytic	33μF	6.3V	1
C206	CD1-0-6160-0001V	Electrolytic	10μF	16V	1
C207	CD4-7-4500-0001V	Electrolytic	0.47μF	50V	1
C208	CD1-0-6160-0001V	Electrolytic	10μF	16V	1
C209	CD4-7-5250-0001V	Electrolytic	4.7μF	25V	1
C210	CM5-6-2500-K00SV	Mylar	0.0056μF	50V ±10%	1
C211	CM2-7-3500-K00SV	Mylar	0.027μF	50V ±10%	1
C212	CM4-7-2500-K00SV	Mylar	0.0047μF	50V ±10%	1
C213	CM4-7-3500-K00SV	Mylar	0.047μF	50V ±10%	1
C214	CD1-0-6160-0001V	Electrolytic	10μF	16V	1
C215	CD1-0-4500-0001V	Electrolytic	0.1μF	50V	1
C216	CD3-3-4500-0001V	Electrolytic	0.33μF	50V	1
C219	CD1-0-5500-0001V	Electrolytic	1μF	50V	1
C220	CD4-7-5250-0001V	Electrolytic	4.7μF	25V	1
C221	CD1-0-5500-0001V	Electrolytic	1μF	50V	1

P.C.BOARD PARTS LIST (Continued)

Ref. No.	Part No.	Description				Q'ty
C222	CD4-7-4500-0001V	Electrolytic	0.47μF	50V		1
C223	CD1-0-6160-0001V	Electrolytic	10μF	16V		1
C224	CD1-0-5500-0001V	Electrolytic	1μF	50V		1
C225	CM1-5-3500-K00SV	Mylar	0.015μF	50V	±10%	1
C226	CM3-9-3500-K00SV	Mylar	0.039μF	50V	±10%	1
C228	CC4-7-1500-KD00C	Ceramic	470pF	50V	±10%	1
C229	CC2-2-1500-KD00C	Ceramic	220pF	50V	±10%	1
C230	CC8-2-0500-KD00C	Ceramic	82pF	50V	±10%	1
C231	CD4-7-5250-0001V	Electrolytic	4.7μF	25V		1
C300	CC2-2-3500-ZG00C	Ceramic	0.022μF	50V	+80,-20%	1
C301	CD1-0-8250-0001V	Electrolytic	1000μF	25V		1
C302	CD4-7-7160-0001V	Electrolytic	470μF	16V		1
C303	CD1-0-7160-0001V	Electrolytic	100μF	16V		1
C304	CD4-7-6160-0001V	Electrolytic	47μF	16V		1
C305	CD2-2-6250-0001V	Electrolytic	22μF	25V		1
C306	CD2-2-6250-0001V	Electrolytic	22μF	25V		1
C307	CD4-7-6250-0001V	Electrolytic	47μF	25V		1
C308	CD1-0-7160-0001V	Electrolytic	100μF	16V		1
C309	CM1-0-3500-K00SV	Mylar	0.01μF	50V	±10%	1
C310	CM6-8-2500-K00SV	Mylar	0.0068μF	50V	±10%	1
C311	CP1-8-3101-J000V	Polypropylen	0.018μF	100V	±5%	1
C312	CD4-7-5250-0001V	Electrolytic	4.7μF	25V		1
C313	CC2-2-3500-ZG00C	Ceramic	0.022μF	50V	+80,-20%	1
C314	CD4-7-663A-0001V	Electrolytic	47μF	6.3V		1
C315	CD1-0-763A-0001V	Electrolytic	100μF	6.3V		1
C316	CD1-0-763A-0001V	Electrolytic	100μF	6.3V		1
C317	CD1-0-763A-0001V	Electrolytic	100μF	6.3V		1
C318	CD1-0-7160-0001V	Electrolytic	100μF	16V		1
C319	CD1-0-5500-0001V	Electrolytic	1μF	50V		1
C320	CD1-0-6160-0001V	Electrolytic	10μF	16V		1
C322	CD2-2-7160-0001V	Electrolytic	220μF	16V		1
C323	CD2-2-7100-0001V	Electrolytic	220μF	10V		1
C324	CD2-2-6160-0001V	Electrolytic	22μF	16V		1
C325	CC2-2-3500-ZG00C	Ceramic	0.022μF	50V	+80,-20%	1
C326	CC2-2-3500-ZG00C	Ceramic	0.022μF	50V	+80,-20%	1
R101	RD1-0-4251-JM000	Carbon	100kΩ	1/4W	±5%	1
R102	RD8-2-2251-JM000	Carbon	8.2kΩ	1/4W	±5%	1
R103	RD6-8-2251-JM000	Carbon	6.8kΩ	1/4W	±5%	1
R104	RD1-8-4251-JM000	Carbon	180kΩ	1/4W	±5%	1
R105	RD1-0-2251-JM000	Carbon	1kΩ	1/4W	±5%	1
R106	RD1-0-3251-JM000	Carbon	10kΩ	1/4W	±5%	1
R107	RD2-2-3251-JM000	Carbon	22kΩ	1/4W	±5%	1
R108	RD1-0-4251-JM000	Carbon	100kΩ	1/4W	±5%	1
R109	RD1-8-1251-JM000	Carbon	180Ω	1/4W	±5%	1
R110	RD4-7-3251-JM000	Carbon	47kΩ	1/4W	±5%	1
R111	RD1-5-4251-JM000	Carbon	150kΩ	1/4W	±5%	1
R112	RD2-7-4251-JM000	Carbon	270kΩ	1/4W	±5%	1
R113	RD2-2-2251-JM000	Carbon	2.2kΩ	1/4W	±5%	1
R114	RD4-7-3251-JM000	Carbon	47kΩ	1/4W	±5%	1
R115	RD1-0-2251-JM000	Carbon	1kΩ	1/4W	±5%	1
R123	RD5-6-2251-JM000	Carbon	5.6kΩ	1/4W	±5%	1
R124	RD8-2-2251-JM000	Carbon	8.2kΩ	1/4W	±5%	1
R125	RD2-7-1251-JM000	Carbon	270Ω	1/4W	±5%	1
R126	RD2-2-2251-JM000	Carbon	2.2kΩ	1/4W	±5%	1
R127	RD2-2-4251-JM000	Carbon	220kΩ	1/4W	±5%	1
R128	RD3-3-3251-JM000	Carbon	33kΩ	1/4W	±5%	1
R129	RD1-0-3251-JM000	Carbon	10kΩ	1/4W	±5%	1
R130	RD1-2-2251-JM000	Carbon	1.2kΩ	1/4W	±5%	1
R131	RD3-9-1251-JM000	Carbon	390Ω	1/4W	±5%	1
R133	RD1-5-2251-JM000	Carbon	1.5kΩ	1/4W	±5%	1
R134	RD3-3-2251-JM000	Carbon	3.3kΩ	1/4W	±5%	1
R135	RD5-6-2251-JM000	Carbon	5.6kΩ	1/4W	±5%	1
R136	RD2-2-4251-JM000	Carbon	220kΩ	1/4W	±5%	1
R137	RD1-2-3251-JM000	Carbon	12kΩ	1/4W	±5%	1

Ref. No.	Part No.	Description				Q'ty
R138	RD6-8-3251-JM000	Carbon	68kΩ	1/4W	±5%	1
R139	RD4-3-3251-JM000	Carbon	43kΩ	1/4W	±5%	1
R140	RD3-3-2251-JM000	Carbon	3.3kΩ	1/4W	±5%	1
R141	RD1-0-4251-JM000	Carbon	100kΩ	1/4W	±5%	1
R142	RD1-0-2251-JM000	Carbon	1kΩ	1/4W	±5%	1
R201	RD1-0-4251-JM000	Carbon	100kΩ	1/4W	±5%	1
R202	RD8-2-2251-JM000	Carbon	8.2kΩ	1/4W	±5%	1
R203	RD6-8-2251-JM000	Carbon	6.8kΩ	1/4W	±5%	1
R204	RD1-8-4251-JM000	Carbon	180kΩ	1/4W	±5%	1
R205	RD1-0-2251-JM000	Carbon	1kΩ	1/4W	±5%	1
R206	RD1-0-3251-JM000	Carbon	10kΩ	1/4W	±5%	1
R207	RD2-2-3251-JM000	Carbon	22kΩ	1/4W	±5%	1
R208	RD1-0-4251-JM000	Carbon	100kΩ	1/4W	±5%	1
R209	RD1-8-1251-JM000	Carbon	180Ω	1/4W	±5%	1
R210	RD4-7-3251-JM000	Carbon	47kΩ	1/4W	±5%	1
R211	RD1-5-4251-JM000	Carbon	150kΩ	1/4W	±5%	1
R212	RD2-7-4251-JM000	Carbon	270kΩ	1/4W	±5%	1
R213	RD2-2-2251-JM000	Carbon	2.2kΩ	1/4W	±5%	1
R214	RD4-7-3251-JM000	Carbon	47kΩ	1/4W	±5%	1
R215	RD1-0-2251-JM000	Carbon	1kΩ	1/4W	±5%	1
R223	RD5-6-2251-JM000	Carbon	5.6kΩ	1/4W	±5%	1
R224	RD8-2-2251-JM000	Carbon	8.2kΩ	1/4W	±5%	1
R225	RD2-7-1251-JM000	Carbon	270Ω	1/4W	±5%	1
R226	RD2-2-2251-JM000	Carbon	2.2kΩ	1/4W	±5%	1
R227	RD2-2-4251-JM000	Carbon	220kΩ	1/4W	±5%	1
R228	RD3-3-3251-JM000	Carbon	33kΩ	1/4W	±5%	1
R229	RD1-0-3251-JM000	Carbon	10kΩ	1/4W	±5%	1
R230	RD1-2-2251-JM000	Carbon	1.2kΩ	1/4W	±5%	1
R231	RD3-9-1251-JM000	Carbon	390Ω	1/4W	±5%	1
R233	RD1-5-2251-JM000	Carbon	1.5kΩ	1/4W	±5%	1
R234	RD3-3-2251-JM000	Carbon	3.3kΩ	1/4W	±5%	1
R235	RD5-6-2251-JM000	Carbon	5.6kΩ	1/4W	±5%	1
R236	RD2-2-4251-JM000	Carbon	220kΩ	1/4W	±5%	1
R237	RD1-2-3251-JM000	Carbon	12kΩ	1/4W	±5%	1
R238	RD6-8-3251-JM000	Carbon	68kΩ	1/4W	±5%	1
R239	RD4-3-3251-JM000	Carbon	43kΩ	1/4W	±5%	1
R240	RD3-3-2251-JM000	Carbon	3.3kΩ	1/4W	±5%	1
R241	RD1-0-4251-JM000	Carbon	100kΩ	1/4W	±5%	1
R242	RD1-0-2251-JM000	Carbon	1kΩ	1/4W	±5%	1
R301	RD6-8-1251-JS000	Carbon	680Ω	1/4W	±5%	1
R304	RD6-8-1251-JM000	Carbon	680Ω	1/4W	±5%	1
R305	RD1-0-3251-JM000	Carbon	10kΩ	1/4W	±5%	1
R306	RD2-2-3251-JM000	Carbon	22kΩ	1/4W	±5%	1
R307	RD2-2-3251-JM000	Carbon	22kΩ	1/4W	±5%	1
R308	RD2-2-3251-JM000	Carbon	22kΩ	1/4W	±5%	1
R309	RD1-0-4251-JM000	Carbon	100kΩ	1/4W	±5%	1
R310	RD2-2-3251-JM000	Carbon	22kΩ	1/4W	±5%	1
R311	RD2-2-3251-JM000	Carbon	22kΩ	1/4W	±5%	1
R312	RD1-0-3251-JM000	Carbon	10kΩ	1/4W	±5%	1
R313	RD2-2-3251-JM000	Carbon	22kΩ	1/4W	±5%	1
R314	RD3-3-2251-JM000	Carbon	3.3kΩ	1/4W	±5%	1
R315	RD3-3-2251-JM000	Carbon	3.3kΩ	1/4W	±5%	1
R316	RD1-2-3251-JM000	Carbon	12kΩ	1/4W	±5%	1
R317	RD1-2-3251-JM000	Carbon	12kΩ	1/4W	±5%	1
R318	RD1-0-3251-JM000	Carbon	10kΩ	1/4W	±5%	1
R319	RD3-3-2251-JM000	Carbon	3.3kΩ	1/4W	±5%	1
R320	RD1-5-2251-JM000	Carbon	1.5kΩ	1/4W	±5%	1
R321	RD3-3-2251-JM000	Carbon	3.3kΩ	1/4W	±5%	1
R322	RD3-3-2251-JM000	Carbon	3.3kΩ	1/4W	±5%	1
R323	RD1-0-2251-JM000	Carbon	1kΩ	1/4W	±5%	1
R324	RD3-3-2251-JM000	Carbon	3.3kΩ	1/4W	±5%	1
R325	RD1-2-3251-JM000	Carbon	12kΩ	1/4W	±5%	1
R326	RD1-5-4251-JM000	Carbon	150kΩ	1/4W	±5%	1
R327	RD6-8-2251-JM000	Carbon	6.8kΩ	1/4W	±5%	1

P.C.BOARD PARTS LIST (Continued)

Ref. No.	Part No.	Description				Q'ty
R328	RD1-2-3251-JM000	Carbon	12kΩ	1/4W	±5%	1
R329	RD1-5-4251-JM000	Carbon	150kΩ	1/4W	±5%	1
R330	RD1-0-3251-JM000	Carbon	10kΩ	1/4W	±5%	1
R331	RD1-2-3251-JM000	Carbon	12kΩ	1/4W	±5%	1
R332	RD1-5-4251-JM000	Carbon	150kΩ	1/4W	±5%	1
R333	RD1-2-3251-JM000	Carbon	12kΩ	1/4W	±5%	1
R334	RD1-2-3251-JM000	Carbon	12kΩ	1/4W	±5%	1
R335	RD1-0-3251-JM000	Carbon	10kΩ	1/4W	±5%	1
R336	RD1-0-3251-JM000	Carbon	10kΩ	1/4W	±5%	1
R337	RD1-2-3251-JM000	Carbon	12kΩ	1/4W	±5%	1
R338	RD1-2-3251-JM000	Carbon	12kΩ	1/4W	±5%	1
R339	RD1-0-4251-JM000	Carbon	100kΩ	1/4W	±5%	1
R340	RD1-0-2251-JM000	Carbon	1kΩ	1/4W	±5%	1
R341	RD1-0-4251-JM000	Carbon	100kΩ	1/4W	±5%	1
R342	RD1-2-3251-JM000	Carbon	12kΩ	1/4W	±5%	1
R343	RD1-0-3251-JM000	Carbon	10kΩ	1/4W	±5%	1
R344	RD1-2-3251-JM000	Carbon	12kΩ	1/4W	±5%	1
R345	RD1-8-2251-JM000	Carbon	1.8kΩ	1/4W	±5%	1
R346	RD1-0-4251-JM000	Carbon	100kΩ	1/4W	±5%	1
R347	RD1-0-1251-JS000	Carbon	100Ω	1/4W	±5%	1
R348	RD1-5-3251-JM000	Carbon	15kΩ	1/4W	±5%	1
R349	RD6-8-0251-JM000	Carbon	68Ω	1/4W	±5%	1
R350	RD1-0-0251-JS000	Carbon	10Ω	1/4W	±5%	1
R351	RD3-9-1251-JM000	Carbon	390Ω	1/4W	±5%	1
R352	RD4-7-1251-JM000	Carbon	470Ω	1/4W	±5%	1
R354	RD2-7-2251-JM000	Carbon	2.7kΩ	1/4W	±5%	1
R355	RD4-7-2251-JM000	Carbon	4.7kΩ	1/4W	±5%	1
R356	RD2-7-3251-JM000	Carbon	27kΩ	1/4W	±5%	1
R357	RD6-8-3251-JM000	Carbon	68kΩ	1/4W	±5%	1
R358	RD1-2-3251-JM000	Carbon	12kΩ	1/4W	±5%	1

LED P.C.B. ASSY

PCB2	141-0-1939-09790	LED P.C.B. Assy				1
	143-3-1302-60811	Screw, Pan Hd. Tapping-B, +M2.6x8				2
	141-2-3749-09700	Shelter				1
	4-2359-78401	Connector 4P Assy				1
D401	DYY---SLB--72GG-	LED, SLB 72 GG 4 HL (−10dB)				1
D402	DYY---SLB--72GG-	LED, SLB 72 GG 4 HL (−5dB)				1
D403	DYY---SLB--72GG-	LED, SLB 72 GG 4 HL (0dB)				1
D404	DYY---SLB--72UR-	LED, SLB 72 UR 4 HL (+3dB)				1
D405	DYY---SLB--72UR-	LED, SLB 72 UR 4 HL (+6dB)				1
D501	DYY---SLB--72GG-	LED, SLB 72 GG 4 HL (−10dB)				1
D502	DYY---SLB--72GG-	LED, SLB 72 GG 4 HL (−5dB)				1
D503	DYY---SLB--72GG-	LED, SLB 72 GG 4 HL (0dB)				1
D504	DYY---SLB--72UR-	LED, SLB 72 UR 4 HL (+3dB)				1
D505	DYY---SLB--72UR-	LED, SLB 72 UR 4 HL (+6dB)				1
IC401	4-2069-74370	IC, TA7366P				1
IC501	4-2069-74370	IC, TA7366P				1
C401	CD1-0-6160-0002V	Electrolytic	10μF	16V		1
C501	CD1-0-6160-0002V	Electrolytic	10μF	16V		1
C701	CD4-7-6160-0002V	Electrolytic	47μF	16V		1
R401	RD4-7-3251-JM000	Carbon	47kΩ	1/4W	±5%	1
R501	RD4-7-3251-JM000	Carbon	47kΩ	1/4W	±5%	1

VOLUME P.C.B. ASSY

PCB3	141-0-1939-09800	Volume P.C.B. Assy				1
CN5	4-2359-77134	Connector 5P Assy				1
VL1	4-2229-75180	Slide Volume (A-50kΩ)				1
VL2	4-2229-75180	Slide Volume (A-50kΩ)				1

NOTES:

1. Parts order must contain Model Number, Part Number and Description.
2. Ordering quantity of screws and resistors must be multiple of 10 pcs.

PRODUCT SAFETY NOTICE

Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol ⚠ in the parts list and the schematic diagram designate components in which safety can be of special significance. When replacing a component identified with ⚠, use only the replacement parts designated, or parts with the same ratings of resistance, wattage or voltage that are designated in the parts list in this manual. Leakage-current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.

SCHEMATIC DIAGRAM

Signal flow of **PLAY**

Signal flow of **RECORD**

No.	Name	Position	No.	Name	Position
S1	Record/Play Switch	PLAY	S6	F.F/Rew Switch (Deck 1)	OFF
S2-1	Tape Select Switch (Deck 1)	NORMAL	S7	Play Mute Switch (Deck 1)	OFF
S2-2	Tape Select Switch (Deck 1)	NORMAL	S8	OSC Switch	OFF
S2-3	DOLBY NR Switch	OFF	S9	Motor Switch (Deck 2)	OFF
S2-4	Synchro Start Switch	SEQ.PLAY	S10	Motor Switch (Deck 1)	OFF
S3	Play Mute Switch (Deck 2)	OFF	S11	REC Switch	OFF
S4	F.F/Rew Switch (Deck 2)	OFF	S12	Power Switch	OFF
S5	CrO_2/Metal Switch	OFF			

PRODUCT SAFETY NOTICE

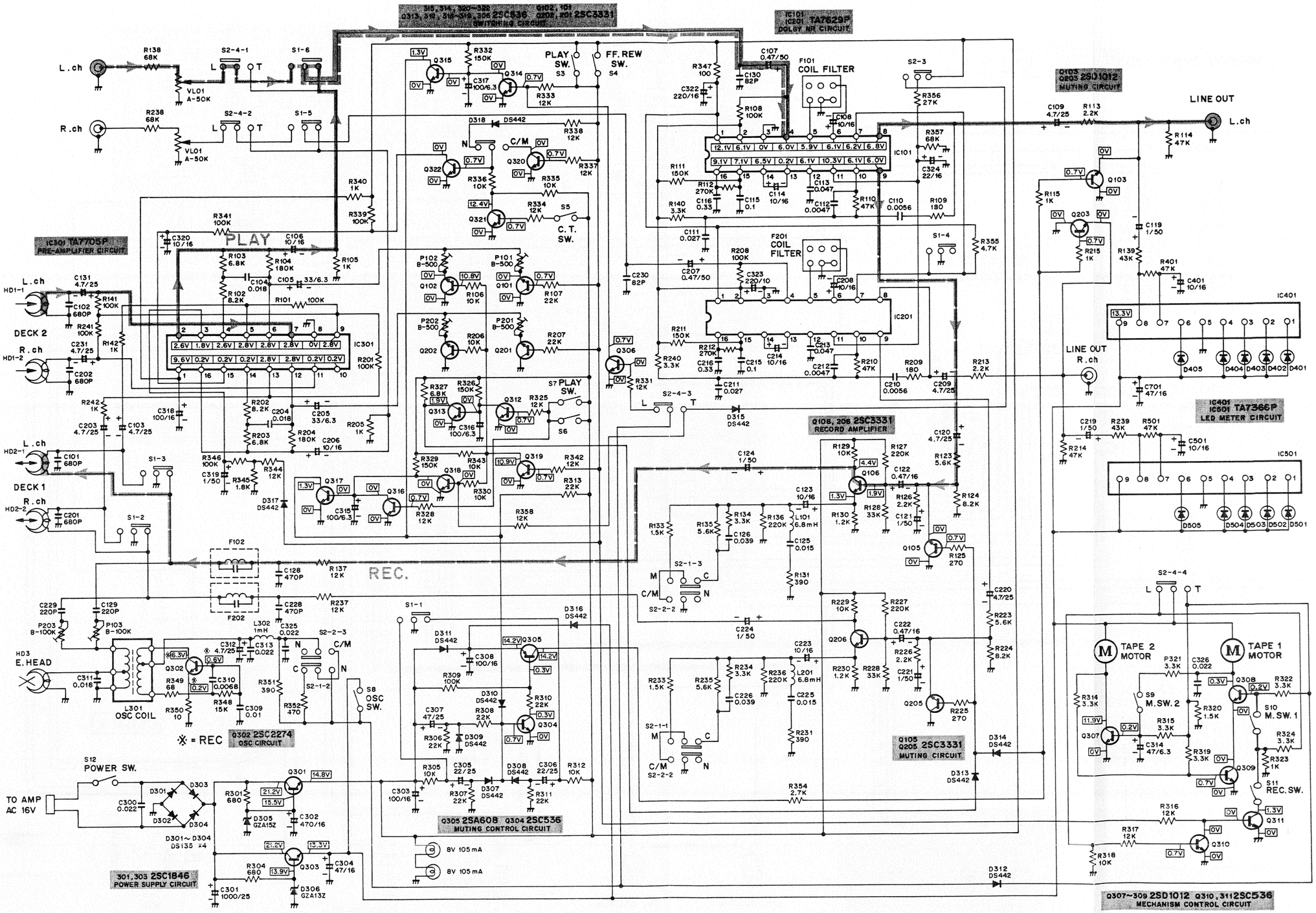
Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol ⚠ in the parts list and the schematic diagram designate components in which safety can be of special significance. When replacing a component identified with ⚠, use only the replacement parts designated, or parts with the same ratings of resistance, wattage or voltage that are designated in the parts list in this manual.
Leakage-current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.

NOTES:

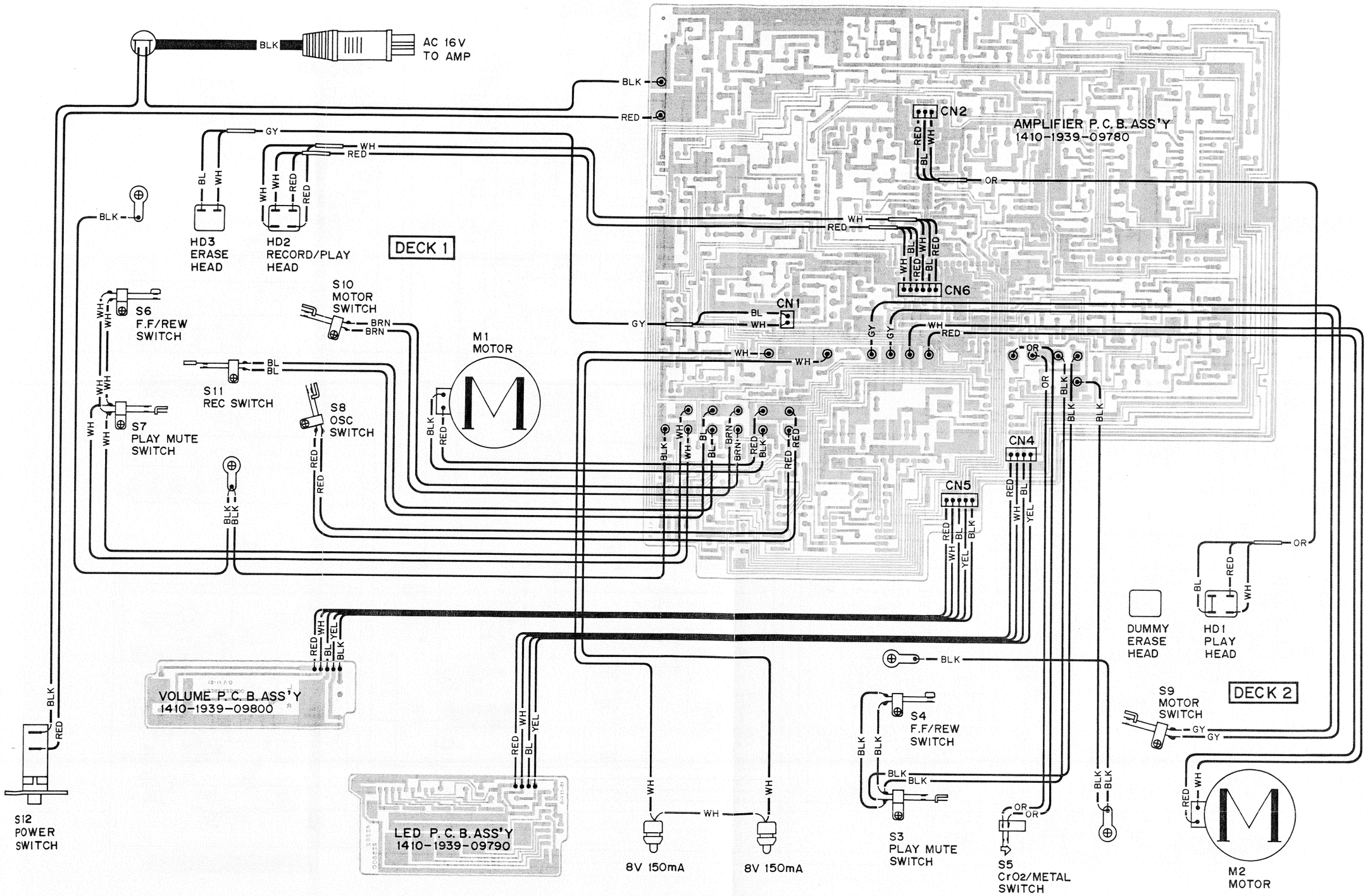
1. All resistors values are indicated in "ohm" ($K=10^3$, $M=10^6$).
2. All capacitors values are indicated in "μF" ($P=10^{-12}$).
3. All voltages indicated on the schematics are measured under the following conditions.
   a. Use a V.T.V.M.
   b. All voltages ±10 % with respect to chassis ground.
   c. No signals at input terminals.
   d. AC input at 16 volts 50 Hz.
4. This is a basic schematic diagram.

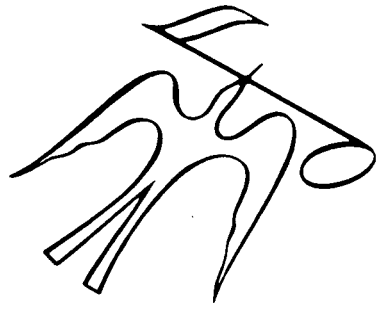
Because Fisher products are subject to continuous improvement, Fisher Corporation reserves the right to make any changes or modifications without notice.

SCHEMATIC DIAGRAM (Continued)



POINT TO POINT WIRING DIAGRAM





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